LINCS PROPOSERS' DAY

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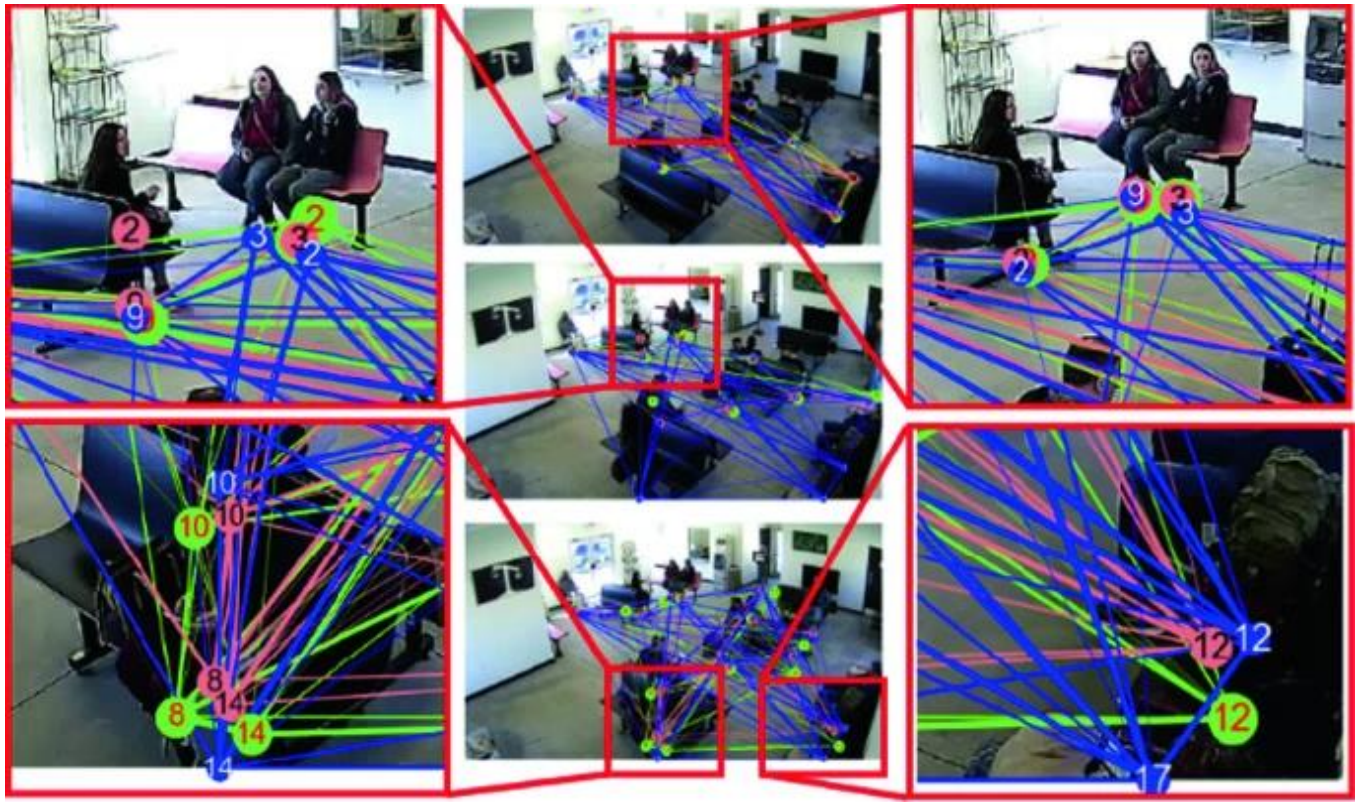
University of South Florida

Past experience

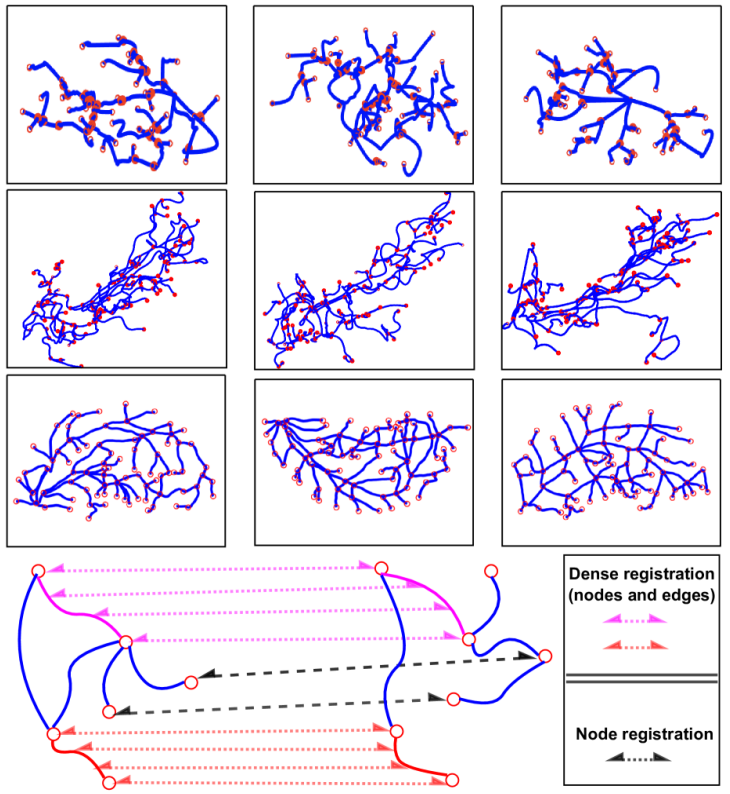
- IARPA Biometric Recognition And Identification At Altitude And Range (BRIAR)
- DIA Solutions for Automated Video Deep Fake Detection
- DIUx xView Challenge
- NIST Activities in Extended Video (ActEV)
- IARPA Functional Map of the World (fMoW)
- DARPA Active Authentication program
- DARPA HumanID program

Mapping objects to a common reference frame (1)

Funded by National Science Foundation



Videos from the MEVA dataset



Bayesian Tracking of Video Graphs Using Joint Kalman Smoothing and Registration https://doi.org/10.1007/978-3-031-19833-5_26

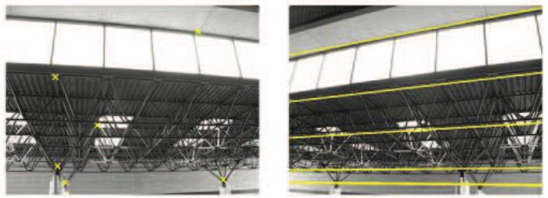
Shape-Graph Matching Network (SGM-net): Registration for Statistical Shape Analysis https://doi.org/10.48550/arXiv.2308.06869

Mapping objects to a common reference frame (2)

(a) Kmsm Image Pair, Inliers = 171, Outlier rate = 1.2%

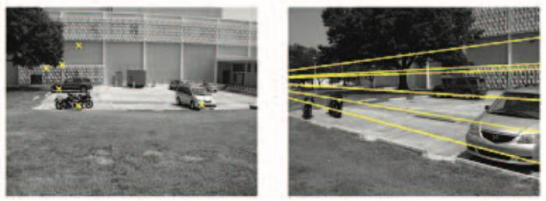
(b) Mountain Image Pair, Inliers = 140, Outlier rate = 29.3%

(c) Two Cars Pair, Inliers = 79, Outlier rate = 57.8%

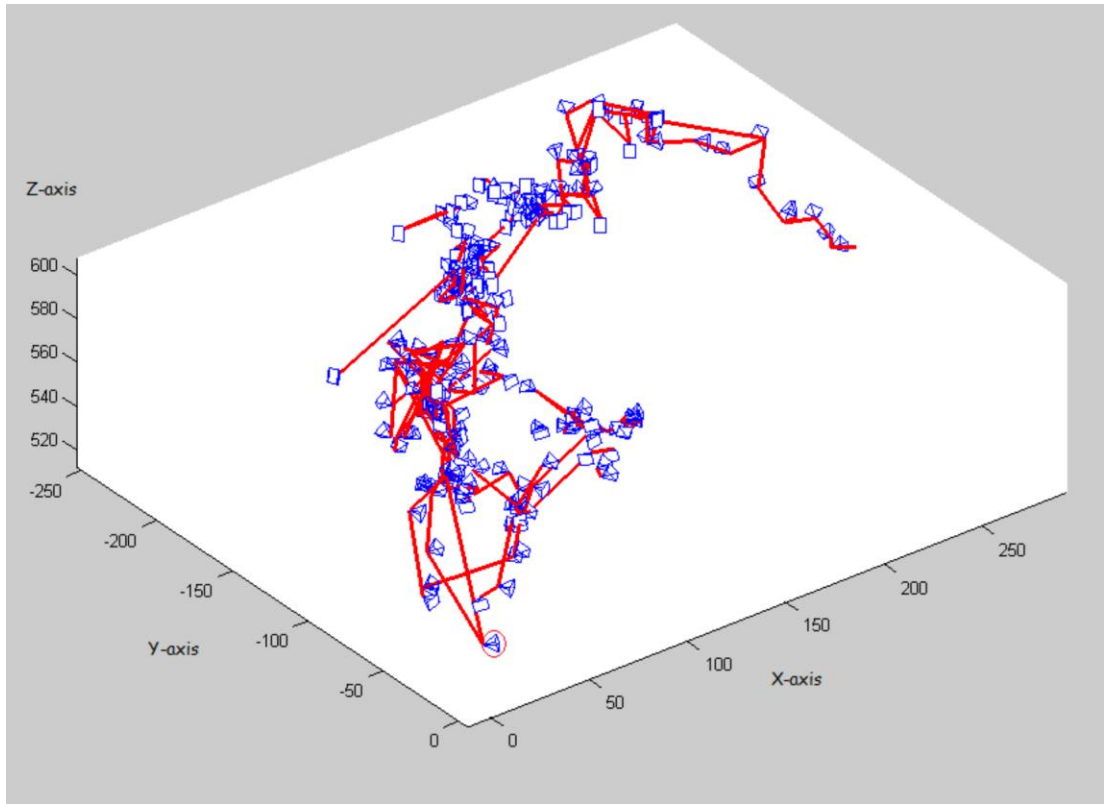


(d) Steel Mesh Pair, Inliers = 31, Outlier rate = 84%

(e) Pillars Pair, Inliers = 27, Outlier rate = 85.4%



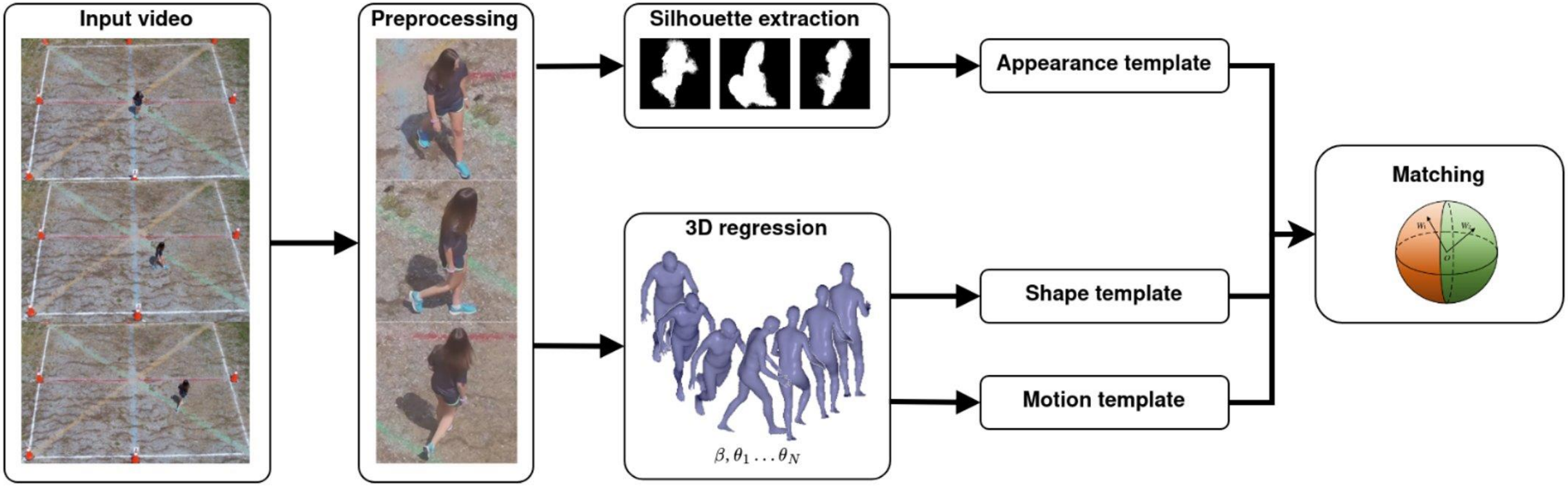
(f) Parking Pair, Inliers = 14, Outlier rate = 92.7%



Hop-Diffusion Monte Carlo for Epipolar Geometry Estimation between Very Wide-Baseline Images https://doi.org/10.1109/TPAMI.2012.227
View Clustering of Wide-Baseline N-views for Photo Tourism https://doi.org/10.1109/SIBGRAPI.2011.43

Mapping objects to a common reference frame (3)
Person ReID (1)

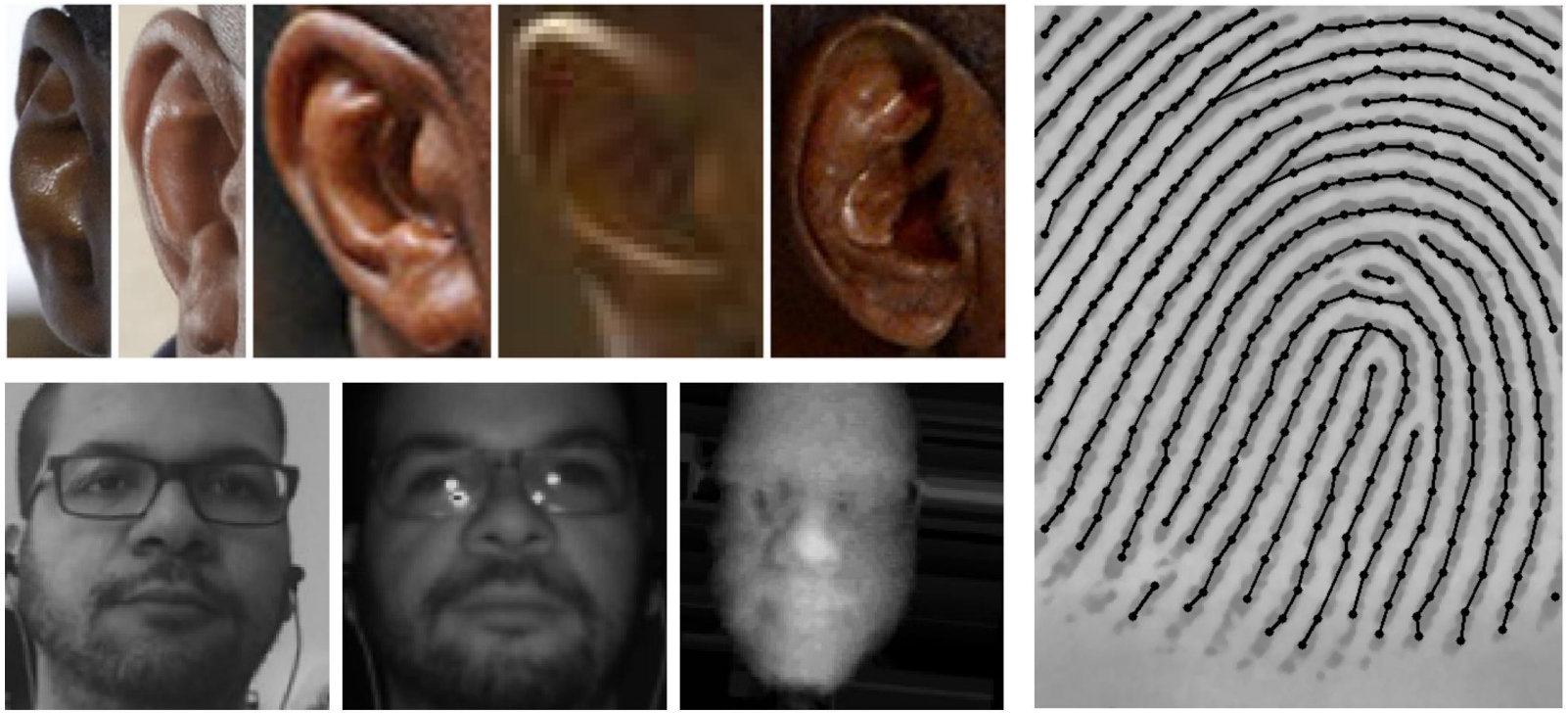
Funded by IARPA BRIAR



BRIAR BGC imagery; permission granted by subjects for use of imagery in public presentations (subject G00393)

Long range gait matching using 3D body fitting with gait-specific motion constraints https://doi.org/10.1109/WACVW58289.2023.00067
Reducing Training Demands for 3D Gait Recognition with Deep Koopman Operator Constraints https://doi.org/10.48550/arXiv.2308.07468

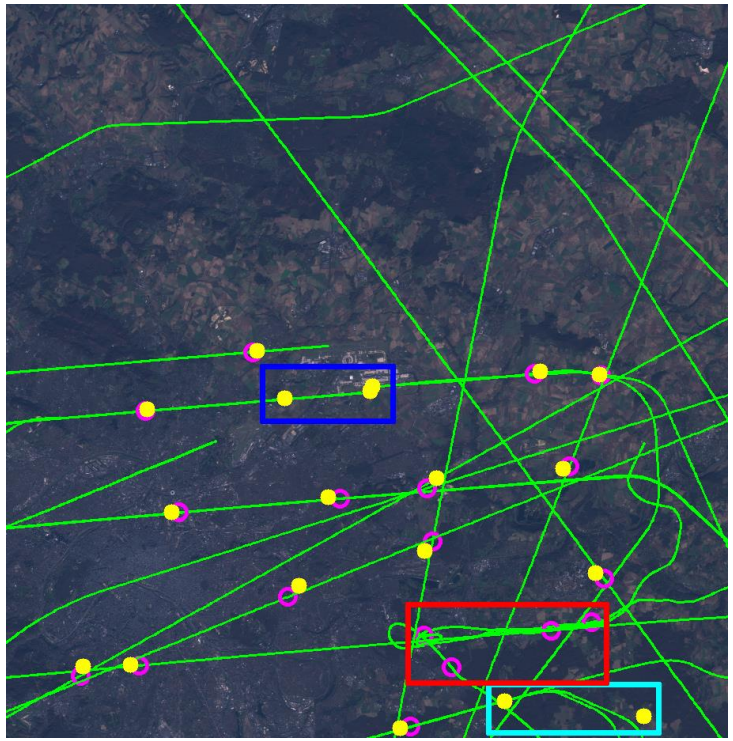
Person ReID (2)
Multimodal sensors (1)

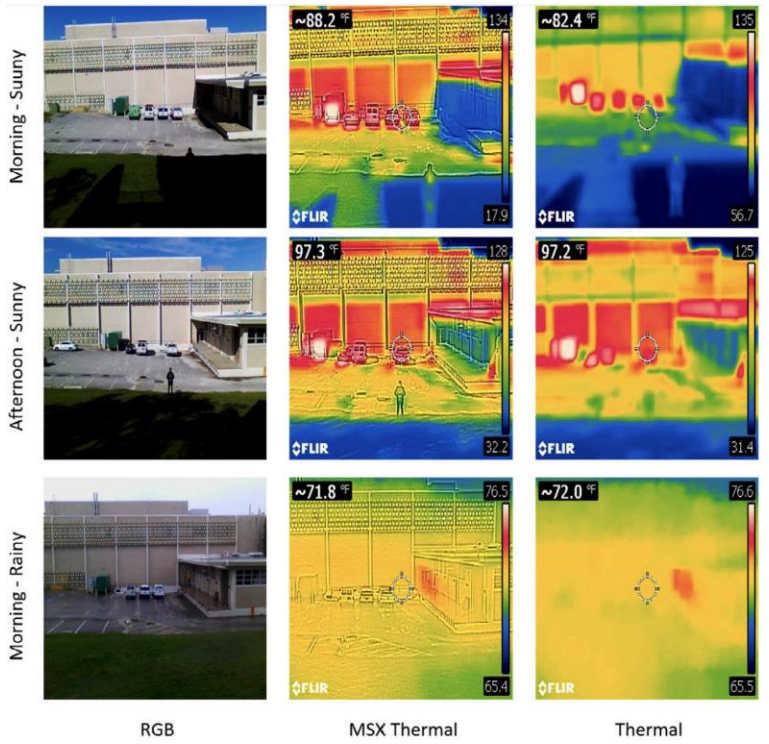


Employing fusion of learned and handcrafted features for unconstrained ear recognition https://doi.org/10.1049/iet-bmt.2017.0210
Pore-based ridge reconstruction for fingerprint recognition https://doi.org/10.1109/CVPRW.2015.7301328
Continuous biometric authentication using Possibilistic C-Means https://doi.org/10.1109/FUZZ-IEEE.2018.8491508

Multimodal sensors (2)
Object detection (1)

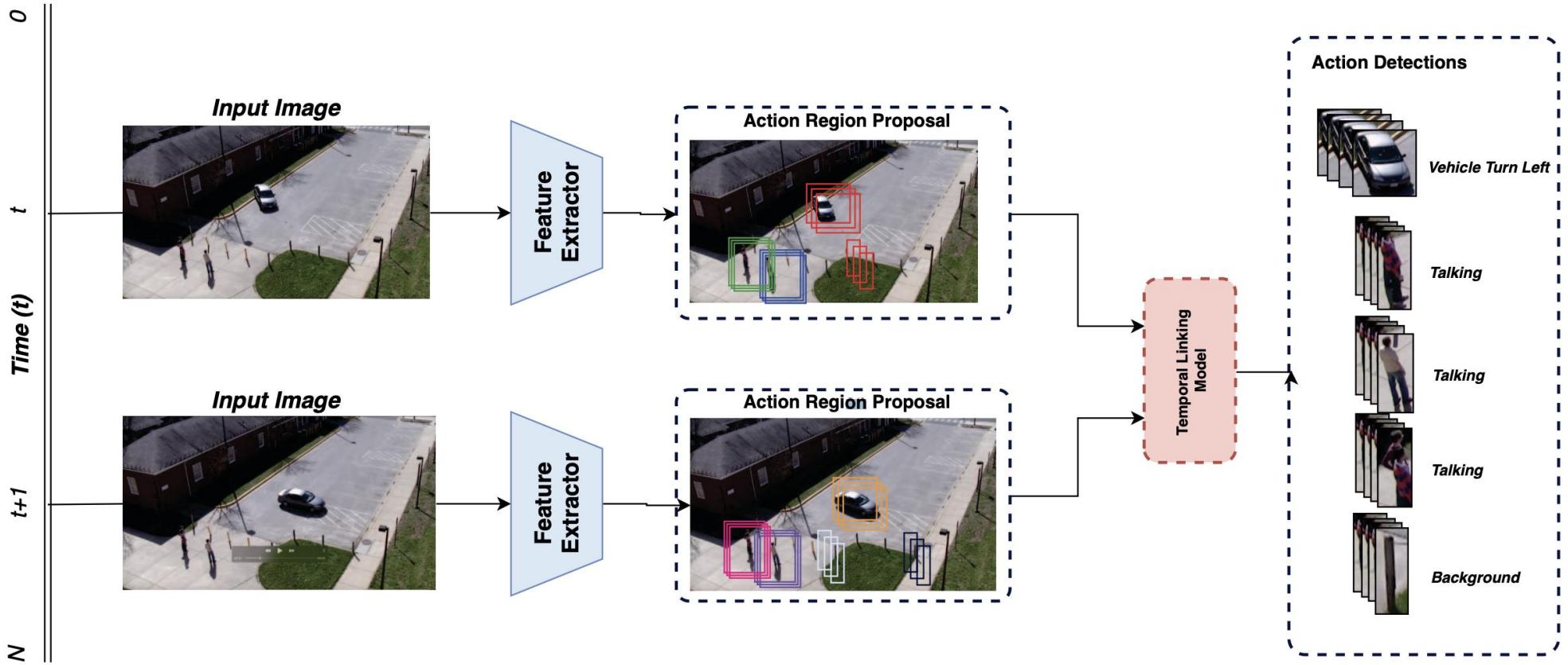
Live at the European Space Agency RACE Website (https://race.esa.int/)





Measuring Economic Activity From Space: A Case Study Using Flying Airplanes and COVID-19 https://doi.org/10.1109/JSTARS.2021.3094053
A systematic literature review on object detection using near infrared and thermal images https://doi.org/10.1016/j.neucom.2023.126804

Object detection (2)



Fine-grained Action Detection in Untrimmed Surveillance Videos https://doi.org/10.1109/WACVW.2019.00014

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